

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listing of claims in the application:

LISTING OF CLAIMS:

1           1. (currently amended) A multiple layer composite  
2     for indicating the pH of a fluid environment comprising a  
3     first layer containing a pH indicating agent for  
4     responding to the fluid in the environment and a fluid  
5     regulating additive to regulate fluid contact with said  
6     pH indicating agent in said first layer, and a second  
7     layer disposed between said first layer and said  
8     environment to control fluid contact with said first  
9     layer.

1           2. (original) A composite as in claim 1, wherein  
2     said first and second layers are selected from the group  
3     consisting of polymer layers, ink layers, fibrous layers  
4     and combinations thereof.

1           3. (currently amended) A composite as in claim 2,  
2     wherein said second layer is a fluid barrier layer that  
3     is permeable or impermeable to said fluid, provided that  
4     when said fluid barrier layer is impermeable, said fluid  
5     may flow around the fluid barrier layer to contact said  
6     first layer.

1           4. (currently amended) A composite as in claim 2,  
2 wherein ~~one or both of said first and second layers~~ said  
3 second layer includes a matrix containing a second fluid  
4 regulating ~~means~~ additive.

1           5. (currently amended) A composite as in claim 4,  
2 wherein said ~~fluid regulating means comprises~~ a second  
3 fluid regulating additive is dispersed in said matrix.

1           6. (original) A composite as in claim 5, wherein  
2 said matrix comprises a polymer.

1           7. (original) A composite as in claim 6, wherein  
2 said fluid regulating additive is selected from the group  
3 consisting of silica gel, superabsorbent polymers,  
4 cellulosic resins, anhydride resins, polyolefin blend  
5 resins, zeolites, calcium oxide, clays and calcium  
6 sulfate.

1           8. (currently amended) A composite as in claim 5,  
2 wherein said ~~matrix comprises~~ second layer is a layer of  
3 ~~printed ink having~~ that provides said matrix, and has  
4 said fluid regulating additive dispersed therein.

1           9. (original) A composite as in claim 8, wherein  
2   said layer of ~~printed~~ ink is formed with a pH indicating  
3   ink.

1           10. (currently amended) A composite as in ~~claim 8,~~  
2   ~~wherein said first layer is a printed ink layer~~ claim 2,  
3   wherein said first layer comprises a first matrix having  
4   said pH indicating agent and said fluid regulating agent  
5   dispersed to regulate fluid contact with said pH  
6   indicating agent, and said second layer comprises a  
7   second matrix separate from said first matrix.

1           11. (original) A composite as in claim 3, wherein  
2   said fluid barrier layer is a microporous fluid  
3   dispersion layer.

1           12. (original) A composite as in claim 11, wherein  
2   said fluid barrier layer is a polymer layer having a  
3   moisture vapor transmission rate selected to restrict  
4   fluid contact of said first layer below a threshold  
5   amount of fluid in said environment.

1           13. (currently amended) A composite as in claim 3,  
2   wherein said fluid barrier layer is a fibrous layer  
3   formed of fibers having surfaces coated with a coating

4    containing a fluid regulating additive moisture  
5    transmitting component.

1            14. (currently amended) A composite as in claim 2,  
2    wherein said ~~fibers are~~ fibrous layers include hollow  
3    fibers.

1            15. (currently amended) A composite as in claim 2,  
2    wherein said composite includes coaxial fibers having  
3    inner and outer fiber layers that provide said first and  
4    second layers.

1            16. (currently amended) A composite as in claim 1,  
2    wherein said ~~pH indicating agent composite~~ composite provides a  
3    different ~~responses~~ response to fluid contact at  
4    different locations within said composite.

1            17. (currently amended) A composite as in claim ~~1~~  
2    16, wherein said ~~pH indicating agent composite~~ composite has  
3    different concentrations of said pH indicating agent at  
4    different locations within said thickness and said  
5    different ~~responses are~~ response is a color or contrast  
6    or intensity ~~variations~~ variation.

1            18. (currently amended) A composite as in claim ~~1~~  
2    16, wherein said composite includes a second pH

3 indicating agent and said ~~pH indicating agents provide~~  
4 composite provides said different ~~responses~~ response at  
5 different locations within said thickness.

1 19. (original) A composite as in claim 1, wherein  
2 said pH indicating agent is selected from the group  
3 consisting of cresol red, thymol blue, methyl yellow,  
4 methyl orange, bromophenol blue, bromocresol green,  
5 methyl red, p-Nitrophenol, phenol red, thymol blue,  
6 phenophthalein, Alizarin yellow R and mixtures thereof.

1 20. (original) A composite as in claim 1, wherein  
2 said composite is part of an absorbent article worn on a  
3 user's body.

1 21. (original) A composite as in claim 1, wherein  
2 said composite is part of a fabric softener sheet.

1 22. (original) A composite as in claim 1, in  
2 combination with a drying device having a window for  
3 viewing the composite.

1 23. (original) A composite as in claim 1, wherein  
2 said second layer reduces bleed of said pH indicating  
3 agent into said fluid.

1           24. (original) A wetness indicator comprising a  
2 layer selected from the group consisting of a polymer  
3 layer, an ink layer, a fibrous layer and combinations  
4 thereof, said layer comprising a matrix containing a pH  
5 indicating agent and a fluid regulating additive to  
6 regulate fluid contact with said pH indicating agent in  
7 said layer.

1           25. (original) An indicator as in claim 24, wherein  
2 said matrix has a thickness and at least one surface to  
3 be exposed to a fluid environment to be monitored by said  
4 pH indicating agent, and said pH indicating agent and  
5 said fluid regulating additive are dispersed through the  
6 thickness of said matrix whereby fluid contacting the  
7 surface is transmitted by said fluid regulating additive  
8 into contact with said pH indicating agent within the  
9 thickness of said matrix.

1           26. (currently amended) An indicator as in claim  
2 25, wherein said fluid penetrates said thickness of said  
3 matrix to an extent that is proportional to the  
4 ~~concentration~~ amount of fluid in said environment.

1           27. (currently amended) An indicator as in claim  
2 26, wherein said ~~pH indicating agent~~ indicator provides a

3 different ~~responses~~ response to fluid contact at  
4 different locations within said thickness of said matrix.

1 28. (currently amended) An indicator as in claim  
2 27, wherein said pH indicating agent has different  
3 concentrations at different locations within said  
4 thickness and said different ~~responses are~~ response is a  
5 color or contrast or intensity ~~variations~~ variation.

1 29. (currently amended) An indicator as in claim  
2 28, wherein said indicator includes a second pH  
3 indicating agent and said ~~pH indicating agents provide~~  
4 indicator provides said different color ~~responses~~  
5 response at different locations within said thickness.

1 30. (original) An indicator as in claim 24, wherein  
2 said fluid regulating additive is selected from the group  
3 consisting of silica gel, superabsorbent polymers,  
4 cellulosic resins, anhydride resins, polyolefin blend  
5 resins, zeolites, calcium oxide, clays and calcium  
6 sulfate.

1 31. (original) An indicator as in claim 24, wherein  
2 said composite is part of an absorbent article worn on a  
3 user's body.

1           32. (original) An indicator as in claim 24, wherein  
2       said composite is a fabric softener sheet.

1           33. (original) An indicator as in claim 24, in  
2       combination with a drying device having a window for  
3       viewing the composite.

1           34. (original) An indicator as in claim 24, wherein  
2       said fluid regulating additive provides a pathway into  
3       said matrix for fluid contact with said pH indicating  
4       agent within said matrix whereby less pH indicating agent  
5       is required for the same response and less bleed of the  
6       agent occurs as compared with an otherwise identical  
7       matrix not having said pathway and providing the same  
8       response.

1           35. (currently amended) A wetness indicator  
2       comprising a multiple layer composite of a first ink  
3       layer and a second ink layer, at least one of said layers  
4       including ~~a fluid regulating additive and at least one of~~  
5       ~~said layers including~~ a pH indicating agent and a fluid  
6       regulating additive to regulate fluid contact with said  
7       pH indicating agent in said at least one of said layers.

1           36. (currently amended) An indicator as in claim  
2       35, wherein said ~~pH indicating ink layers contain a fluid~~



3 regulating additive is selected from the group consisting  
4 of silica gel, superabsorbent polymers, cellulosic  
5 resins, anhydride resins, polyolefin blend resins,  
6 zeolites, calcium oxide, clays and calcium sulfate.

1 37. (currently amended) An indicator as in claim  
2 36, wherein said at least one layer provides of said  
3 layers comprises a polymer matrix containing said pH  
4 indicating agent and said fluid regulating additive.

1 38. (currently amended) An indicator as in claim  
2 37, wherein said polymer matrix has a thickness and at  
3 least one surface to be exposed to an environment  
4 containing a fluid ~~providing the environment with a~~  
5 ~~finite pH~~ to be monitored by said pH indicating agent,  
6 and said pH indicating agent and said fluid regulating  
7 additive are dispersed through the thickness of said  
8 matrix whereby fluid contacting the surface is  
9 transmitted by said fluid regulating additive into  
10 contact with said pH indicating agent within the  
11 thickness of said matrix.

1 39. (currently amended) An indicator as in claim  
2 38, wherein said fluid penetrates said thickness of said  
3 matrix to an extent that is proportional to the  
4 ~~concentration~~ amount of fluid in said environment.

1           40. (currently amended) An indicator as in claim  
2   39, wherein said ~~pH indicating agents provide~~ indicator  
3   provides a different ~~responses~~ response to fluid contact  
4   at different locations within said thickness of said  
5   matrix.

1           41. (currently amended) An indicator as in claim  
2   40, wherein said pH indicating agent has different  
3   concentrations at different locations within said  
4   thickness and said different ~~responses are~~ response is a  
5   color ~~signal~~ , or contrast or intensity variations  
6   variation.

1           42. (currently amended) An indicator as in claim  
2   41, wherein said indicator includes a second pH  
3   indicating agent and said ~~pH indicating agents provide~~  
4   indicator provides said different color ~~responses~~  
5   response at different locations within said thickness.

1           43. (original) An indicator as in claim 41, wherein  
2   said composite is part of an absorbent article worn on a  
3   user's body.

1           44. (original) An indicator as in claim 37, wherein  
2   said composite is a fabric softener sheet.

1           45. (original) An indicator as in claim 37, in  
2 combination with a drying device having a window for  
3 viewing the composite.

1           46. (currently amended) An indicator as in claim  
2 35, wherein said at least one of said layers reduces  
3 bleed of said pH indicating agent into said fluid.

1           47. (original) A wetness indicating ink comprising  
2 a polymer, a pH indicating agent and a fluid regulating  
3 additive in an amount effective to provide a cured or  
4 dried layer of said ink having said additive dispersed  
5 therein with sufficient moisture transmission to cause a  
6 fluid contacting said layer to be transmitted into  
7 contact with said pH indicating agent within said layer.

1           48. (original) An ink as in claim 47, wherein said  
2 ink is a solvent ink containing a solvent soluble or  
3 solvent dispersible fluid regulating additive.

1           49. (original) An ink as in claim 48, wherein said  
2 ink is a radiation curable ink containing a dispersible  
3 fluid regulating additive.

1           50. (original) An ink as in claim 47, wherein said  
2 fluid regulating additive is selected from the group  
3 consisting of silica gel, superabsorbent polymers,  
4 cellulosic resins, anhydride resins, polyolefin blend  
5 resins, zeolites, calcium oxide, clays and calcium  
6 sulfate.